

# Diabetes

Disabling, Deadly, and on the Rise  
2005

**What is the lifetime risk for diabetes for people born in the United States in 2000?**

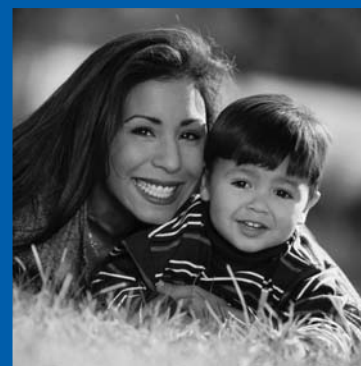


**1 of 3 Americans**



**1 of 2  
Hispanic  
females**

**2 of 5 African  
Americans and  
Hispanics**



**Control diabetes. For life.**

*“New evidence shows that 1 in 3 Americans born in 2000 will develop diabetes sometime during their lifetime. Together we can and must do more to prevent and control this growing epidemic of diabetes.”*

*Julie Louise Gerberding, MD, MPH  
Director  
Centers for Disease Control and Prevention*

Revised March 2005

## Diabetes: A Leading Cause of Death in America

During 1980–2002, the number of people with diabetes in the United States more than doubled, from 5.8 million to 13.3 million. Although more than 18 million Americans have diabetes, 5.2 million cases are undiagnosed.

People with diabetes have a shortage of insulin or a decreased ability to use insulin, a hormone that allows glucose (sugar) to enter cells and be converted to energy. When diabetes is not controlled, glucose and fats remain in the blood and, over time, damage vital organs. Diabetes can cause heart disease, stroke, blindness, kidney failure, pregnancy complications, lower-extremity amputations, and deaths related to flu and pneumonia. Heart disease is the leading cause of diabetes-related deaths, and death rates are about 2–4 times higher for adults with diabetes than for those without the disease.

There are two main types of diabetes. Type 1 most often appears during childhood or adolescence. Type 2 diabetes, which is linked to obesity and physical inactivity, accounts for 90%–95% of diabetes cases and most often appears in people older than 40. However, it is now being found in younger people and is even being diagnosed among children and teens.

Diabetes has its greatest effects on older adults, women, and certain racial and ethnic groups. One in five adults over age 65 has diabetes. African American, Hispanic, American Indian, and Alaska Native adults are 2–3 times more likely than white adults to have diabetes.

In addition to the millions of Americans with diabetes, an estimated 41 million U.S. adults aged 40–74 have prediabetes—that is, their blood sugar level is elevated but is not high enough to be classified as diabetes. People with prediabetes are at high risk for developing diabetes.

### Cost of Diabetes in the United States, 2002

- Total (direct and indirect): \$132 billion.
- Direct medical costs: \$92 billion.
- Indirect costs (disability, work loss, premature death): \$40 billion.
- Average annual health care costs for a person with diabetes: \$13,243.
- Average annual health care costs for a person without diabetes: \$2,560.

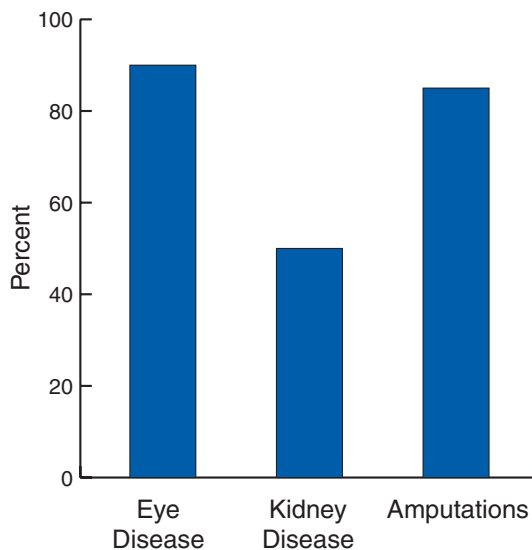
## Diabetes Is Preventable and Controllable

Although the increasing burden of diabetes and its complications is alarming, much of this burden could be prevented with early detection, improved delivery of care, and better education on diabetes self-management.

Possible complications include the following:

- **Cardiovascular disease.** Heart disease and stroke cause about 65% of deaths among people with diabetes. These deaths could be reduced by 30% with improved care to control blood pressure, blood glucose, and blood cholesterol levels.
- **Pregnancy complications.** About 18,000 women with preexisting diabetes and about 135,000 with gestational diabetes give birth each year. These women and their babies are at higher risk for serious complications such as stillbirths, congenital malformations, and cesarean sections. These risks can be reduced with screenings and diabetes care before, during, and after pregnancy.
- **Flu- and pneumonia-related deaths.** Each year, 10,000–30,000 people with diabetes die of complications from flu or pneumonia. Although they are about three times more likely to die of these complications than people without diabetes, only 55% get an annual flu shot.

### Percentage of Diabetes Complications That Could Be Reduced or Prevented



Each year, 12,000–24,000 people with diabetes become blind, more than 42,800 develop kidney failure, and about 82,000 have leg, foot, or toe amputations. Preventive care such as routine eye and foot examinations, self-monitoring of blood glucose, and glycemic control could reduce these numbers. Source: <http://www.cdc.gov/diabetes/pubs/estimates.htm>.

## CDC Provides National Leadership and Builds Partnerships

CDC is committed to ensuring that all people achieve their optimal lifespan with the best possible quality of health in every stage of life. With a number of important new health impact goals, CDC is setting the agenda to enable the American people to enjoy a healthy life by delaying death and the onset of illness and disability. In addition, CDC works to eliminate disparities by accelerating improvements for those at the greatest risk of poor health.

CDC provides leadership and funding to diabetes prevention and control programs nationwide. CDC also works with partners to provide data for public health decisions, inform the public about diabetes, and ensure good care and education for people with diabetes.

### Promoting Effective State Programs

CDC currently provides limited support to 26 states, 8 U.S. territories, and the District of Columbia for capacity building diabetes prevention and control programs. CDC also provides substantial support to 24 states for basic implementation programs. With fiscal year 2005 funding of \$63.5 million, CDC will increase the number of basic implementation programs. In addition, CDC works with its partners to develop national public health performance standards for diabetes care. The CDC National Diabetes Program has adopted the concept of conducting assessments based on the 10 essential public health services (<http://www.cdc.gov/diabetes>). Results of the assessments will help to identify areas of strength and areas for improvement needed to develop the best public health programs for diabetes prevention and control.

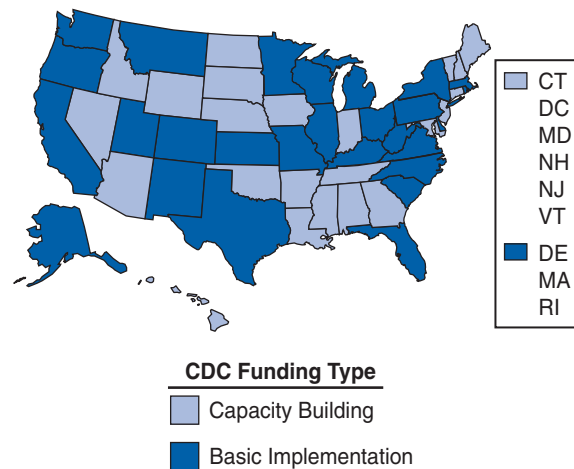
### Monitoring the Burden and Translating Science

Timely data and public health research are essential for developing a better understanding of how diabetes affects different populations and how quality of care can be improved. CDC analyzes information from several national data sources, including the Behavioral Risk Factor Surveillance System, and explores ways to collect better diabetes data on groups most at risk. To translate scientific data into higher quality care, CDC works with many research partners, managed care organizations, and community health centers to assess how accepted standards of diabetes care are applied in clinical care settings. CDC and its partners also explore population-based quality of care, examining disparities in the quality of diabetes care and developing strategies to improve existing care practices.

### Providing Education and Sharing Expertise

The National Diabetes Education Program (NDEP),

### CDC Funding for Diabetes Control Programs, Fiscal Year 2005\*



\* CDC also funds the following U.S. territories for capacity building diabetes control programs: American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Island, Palau, Puerto Rico, and U.S. Virgin Islands.

Source: <http://www.cdc.gov/diabetes/states/index.htm>.

sponsored by CDC and the National Institutes of Health (NIH), comprises a network of more than 200 public and private partners that works to increase awareness about diabetes and its control among health care providers and people with or at risk for diabetes. The goals are to help people with diabetes better manage the disease and to promote policies that improve the quality of care provided and access to such care. NDEP partners, including six national minority organizations, also develop community interventions and tools to improve diabetes care and prevention, especially for communities with a high burden of diabetes. NDEP products are available on the Internet (<http://www.ndep.nih.gov>) in English, Spanish, and 15 Asian and Pacific Islander languages. NDEP also has three Web sites that target specific audiences: <http://www.diabetesatwork.org> (for business and managed care companies), <http://www.betterdiabetescare.nih.gov> (for health care providers), and <http://www.cdc.gov/diabetes/ndep> (for anyone interested in more information). CDC also develops other resources for health professionals, people with diabetes, and communities. For example, *Diabetes Today* is a train-the-trainer program that guides health professionals and community leaders in developing a community plan for preventing the complications of diabetes. A Spanish version is available, and a regional training site serves Hawaii and the Pacific Basin.

## Supporting Prevention Research

Studies suggest that the progression from prediabetes to diabetes can be prevented or delayed. In 2001, results from two landmark clinical trials—the Finnish Diabetes Prevention Study and the U.S. Diabetes Prevention Program (DPP)—demonstrated that sustained lifestyle changes that included modest weight loss and physical activity substantially reduced progression to diabetes among older adults who were at very high risk.

Results from the DPP were so compelling that the trial was ended a year early. The lifestyle intervention worked equally well for men and women and all racial/ethnic groups, and it was most effective among people aged 60 or older. A healthy diet and modest physical activity can help people cut their risk for type 2 diabetes.

## Targeting Populations at Risk

- **Primary prevention for people most at risk.** Congress provided funds in FY 2005 for CDC to implement primary prevention pilot programs at the state level. CDC is developing methods to identify people at high risk for diabetes, policies to help these people reduce their risk, and public health programs that will slow the diabetes epidemic.
- **Native Diabetes Wellness Program (formerly the National Diabetes Prevention Center).** In response to the diabetes epidemic among American Indians and Alaska Natives, CDC is working with these communities to develop culturally relevant and scientifically sound interventions to prevent complications from diabetes.
- **National Agenda for Public Health Action: The National Public Health Initiative on Diabetes and Women's Health.** This publication offers recommendations to help professionals, women and their families, health care systems, work sites, communities, and schools address the burden of diabetes among women. CDC is working with numerous partners to carry out the plan.
- **SEARCH for Diabetes in Youth.** Rising rates of diabetes among youth are a growing public health concern. CDC and NIH are funding this 5-year, multicenter study to examine the status of diabetes among U.S. children and adolescents.

## State Diabetes Program In Action: California

In California, more than 2 million people have diabetes. The disease disproportionately burdens Latinos, African Americans, Native Americans, and Asian/Pacific Islanders. The California Diabetes Prevention and Control Program (DPCP) hosted a forum for the custodial staff of the California Department of Health Services, which employs 5,000 people in Sacramento.

The event was in response to numerous requests for information from the predominantly African American, Latino, and Asian staff. The event promoted the state's 5 A Day nutrition program, encouraged physical activity by recruiting teams for America's Walk for Diabetes and giving out free pedometers, distributed health literature, and encouraged attendees to make a personal game plan using NDEP materials.

Organizers also discussed diabetes prevention and control and the important roles that physical activity and nutrition play in preventing diabetes and its complications. Now, the department's custodians regularly wear their pedometers at work to measure their steps, and they serve as motivational models for all employees. This program demonstrates the effectiveness of simply reaching out to colleagues.

## Future Directions

CDC will continue to work with its partners to strengthen diabetes surveillance, prevention research, interventions, and communications. CDC also plans to increase the number of diabetes prevention and control programs that receive basic implementation funding to put their plans into action, expand research and surveillance activities to address the unique needs of women and children with diabetes, develop and carry out a national public health strategy to address type 2 diabetes among children, and expand the activities of the National Diabetes Education Program.

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